

Amendments to the Claims

Please amend page 10, line 1 as follows:

Claims What is claimed is:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method ~~Method~~ for determining *in vivo* protein activity comprising
 - a) hyperpolarising the NMR active nuclei of samples collected from a human or non-human animate body preadministered with at least one probe compound containing at least one NMR active nuclei; and
 - b) analysing said samples by NMR spectroscopy
2. (Currently amended) The method ~~Method~~ according to claim 1, wherein ~~from said analysing analysis of step b)~~ further comprises the step of generating an NMR pattern I, wherein said generating step further ~~is generated, the method comprises the further steps~~ of
 - c) hyperpolarising the NMR active nuclei of samples collected from a human or non-human animate body preadministered with said at least one probe compound and at least one putative drug,
 - d) analysing said samples by NMR spectroscopy and hereby generating an NMR pattern II,
 - e) comparing the NMR patterns I and II thus identifying distinctions in the NMR pattern II, which are due to the administration of the putative drug.
3. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 2~~ claim 1, wherein at least two probe compounds are selected.
4. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 3~~ claim 1, wherein the probe compounds are enriched with NMR active nuclei.

5. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 4~~ claim 1, wherein said hyperpolarising step hyperpolarisation is carried out by one of means of polarisation transfer from a noble gas, brute force, dynamic nuclear polarisation (DNP) and ~~or~~ spin refrigeration.
6. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 5~~ claim 1, wherein the collected samples are biofluids.
7. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 6~~ claim 1, wherein said probe compounds are substrates, inducers or inhibitors for Cytochrome P 450 (CYP450)
8. (Currently amended) The method ~~Method~~ according to claim 7, wherein said probe compounds are substrates, inducers or inhibitors for CYP 450 isoenzymes selected from the group consisting of CYP1A2, CYP2A6, CYP2C8/9, CYP2C19, CYP2D6, CYP2E1 and CYP3A4.
9. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 8~~ claim 1, further comprising the step of ~~for~~ phenotyping
10. (Currently amended) The method ~~Method~~ according to ~~claims 2 to 8~~ claim 2, further comprising the step of ~~for~~ studying drug-drug interaction.
11. (Currently amended) A mixture ~~Mixture~~ comprising at least two probe compounds, all probe compounds being enriched with at least one of ^{13}C - and ~~and/or~~ ^{15}N NMR active nuclei.
12. (Currently amended) The mixture ~~Mixture~~ according to claim 11, wherein said mixture comprises at least 3 probe compounds, preferably at least 4 probe compounds.

13. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 12~~ claim 11, wherein said probe compounds are probe compounds that interact with proteins selected from the group consisting of NADPH quinone oxireductases, CYP450, N-acetyltransferase, glutathione transferase, thiomethyltransferase, thiopurine methyltransferase, sulfotransferase, UDP-glucuronosyl transferase, pseudocholinesterase, serotonin transport protein, ATP binding cassette (ABC's) and p-glycoprotein.
14. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 13~~ claim 11, wherein the mixture comprises probe compounds selected from the group consisting of phenacetin, coumarin, tolbutamide, phenytoin, mephentyoin, S-mephentyoin, bufuralol, chlorzoxazone, midazolam, caffeine, dapsone, diclofenac, debrisoquine, bupropion, antipyrine, dextromethorphan, warfarin, diazepam, alprazolam, triazolam, flurazepam, chlodiazepoxide theophylline, phenobarbital propranolol, metoprolol, labetalol, nifedipine, digitoxin, quinidine, mexiletine, lidocaine, imipramine, flurbiprofen, omeprazole, terfenadine, furafylline, codeine, nicotine, sparteine, erythromycin, benzoylcholine, butrylcholine, paraoxon, para-aminosalicylic acid, isoniazid, sulfamethazine, 5-fluorouracil, trans-stilbene oxide, D-penicillamine, captopril, ipomeanol, cyclophosphamide, halothane, zidovudine, testosterone, acetaminophen, hexobarbital, carbamazepine, cortisol, oltipraz, cyclosporin A and paclitaxel.
15. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 13~~ claim 11, wherein the mixture comprises probe compounds selected from the group consisting of sulfathiazole, dapsone, isoniazid, sulfamethoxazole, hydrazaline, caffeine and procainamide.
16. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 13~~ claim 11, wherein the mixture comprises probe compounds selected from the group consisting of phenobarbital, oltipraz and 3-methyl-cholanthrene.

17. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 13~~ claim 11, wherein the mixture comprises probe compounds selected from the group consisting of azathioprine, mercaptopurine and thioguanine.
18. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 17~~ claim 11, wherein the mixture further comprises at least one putative drug.
19. (Currently amended) Use of the mixture according to ~~claims 11 to 17~~ claim 11, for the determination of in vivo protein activity, preferably for phenotyping.
20. (Original) Use of the mixture according to claim 18 for studying drug-drug interaction.
21. (Currently amended) An agent for determining *in vivo* protein activity comprising a mixture ~~Mixture~~ comprising at least two probe compounds, all probe compounds being enriched with at least one of ^{13}C and ~~and/or~~ ^{15}N NMR active nuclei, ~~for use as an agent for determining *in vivo* protein activity.~~
22. (Currently amended) An agent for determining *in vivo* protein activity comprising a mixture ~~Mixture~~ comprising at least two probe compounds, all probe compounds being enriched with at least one of ^{13}C and ~~and/or~~ ^{15}N NMR active nuclei, for the manufacture of an agent for determining *in vivo* protein activity.
23. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 21 to 22~~ claim 21, wherein the mixture further comprises at least one putative drug.